

Thinking forward : using stories from the recent past in mathematics education in England

POVEY, Hilary <<http://orcid.org/0000-0002-8524-0550>> and ADAMS, Gill <<http://orcid.org/0000-0003-2088-8708>>

Available from Sheffield Hallam University Research Archive (SHURA) at:

<https://shura.shu.ac.uk/14644/>

This document is the Accepted Version [AM]

Citation:

POVEY, Hilary and ADAMS, Gill (2017). Thinking forward : using stories from the recent past in mathematics education in England. In: CHRONAKI, Anna, (ed.) Mathematics Education : Proceedings of 9th International Conference of Mathematics Education and Society (MES) Conference, Volos, Greece, April 2017. Thessaly, Greece, International Conference of Mathematics Education and Society (MES), 803-811. [Book Section]

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

THINKING FORWARD: USING STORIES FROM THE RECENT PAST IN MATHEMATICS EDUCATION IN ENGLAND

Hilary Povey and Gill Adams

Sheffield Hallam University, England

In mathematics education, the neoliberal project has been extraordinarily successful in England, and beyond, in framing how we currently think and work. In this paper we explore the role of radical history in supporting action in the present to overcome neoliberalism's hegemony and consider how it might enable shaping an alternative vision for the future. We describe a project with which we are presently engaged which looks back to the Smile curriculum development project (1972-1990) and uses both historical archive material and current remembered accounts to provide web-based resources intended to provoke critical thinking. In particular, we discuss the use of evocative, shared, personal stories in achieving these ends.

INTRODUCTION

Dominant discourses largely hold sway through instilling the conviction that what they propose is natural, common-sense and the only possible way for things to be (Gramsci, 1971). In England, and beyond, neoliberalism has been extraordinarily successful in this respect. Indeed, Perry Anderson goes so far as to say 'there are no longer any significant oppositions - that is, systematic rival outlooks - within the thought-world of the West' (2000: 13). This discussion paper considers one of the consequences of this and argues for a particular strategy which we can adopt in the struggle for more democratic and socialist thinking in mathematics education.

We have come to the view that neoliberalism both silences our histories and excludes any possible futures except its own. It shuts us off from imagining a different world - neoliberal capitalism represents "the end of history", with no further development possible in social and political thought. And it cuts us adrift from our past and de-historicises our lived experience of the present. John Berger (2016) uses the metaphor of *no-fixed-abode* or homelessness to capture the experience of the absence of a sense of history:

Any sense of history, linking past and future, has been marginalised if not eliminated. People are suffering a sense of historical loneliness. (p. 17)

This is as true in mathematics education as in the wider social and political sphere. To take just one example, we have been startled to discover that, for those who have entered the profession in, say, the last fifteen years, the idea both that teachers might be trusted to write their own examination papers for the public school leaving examination, as they were in England in the 1970s - and also that widespread cheating did not take place - seems unbelievable.

In this discussion paper, we seek to explore the contribution of historical awareness to a radical politics of mathematics education. In particular, we consider how to use

history to engender a radical consciousness and a critique of contemporary neoliberal educational discourses and to provide a meeting place (Berger, 2016) from whence to understand, interrogate and oppose the dominant discourses currently shaping society.

In the first section, we begin by providing the background and context for the discussion which follows, giving a brief overview of the current neoliberal social and political context in education in England and considering its impact on teachers' sense of self. Next we introduce the reader to *Smile Mathematics*, a secondary mathematics curriculum development project of the 1970s and 1980s which forms the vehicle for our thinking about the significance of history. Lastly in this section, we briefly describe a research and action project based on the history of *Smile* which will produce a web resource to include amongst other material retrospective stories based on extended conversations with a number of participants who were involved in *Smile*. In the second section, we discuss the radical history tradition; our own deep investment in the stories being told; and the risks and "pay-offs" of telling historical stories. We work with the notion that history is about the present and argue for the significance of the everyday. In our conclusion we acknowledge the utopian nature of the whole enterprise.

BACKGROUND AND CONTEXT FOR THE DISCUSSION¹

The sense that viewing contemporary mathematics education through the lens of recent relevant history might contribute to achieving critical distance from the current neoliberalism in education led us to initiate a project to explore this possibility: *A study of teacher led curriculum change: the case of Smile Mathematics, 1972-1990*. The aims of the project are to record an historical example of teacher-led curriculum change in mathematics in England; to analyse how and under what social, political and cultural circumstances such teacher autonomy becomes possible; and to provide a 'public resource' (Nixon, Walker & Clough, 2003: 87) to review current practices and understandings.

Before describing the project, we give a brief overview of the current social and political context in England and its impact on teachers' sense of self. The impact of neoliberal thinking on education in England is well known (for example, Ball, 2003; Day & Smethem, 2009; Groundwater-Smith & Mockler, 2009; Stronach, Corbin, McNamara, Stark, & Warne, 2002; Macpherson, Robertson & Walford, 2014). An 'epidemic of reform' (Ball 2003: 215) based on constant surveillance and ranking of performance has changed who teachers are as well as what they do, with education recast as a consumer good rather than as a moral enterprise and a public service. The independent thinking of teachers is challenged, as are their individual and collective professional and personal identities. Systems of testing and auditing shape, order, position and hierarchise those in the field (Sachs, 2001) through systems of comparison, evaluation and documentation, making everything calculable:

it is impossible to over-estimate the significance of this in the life of the school, as a complex of surveillance, monitoring, tracking, coordinating, reporting, targeting, motivating (Ball, Maguire, Braun, Perryman & Hoskins 2012: 525).

Currently, in England, pupil performance in mathematics examinations at age sixteen usually operates as the single most important item of data in judging and ranking (and then punishing) secondary schools, with mathematics teachers therefore routinely experiencing greater pressure and coming under more scrutiny than most, if not all, of their colleagues. We are indeed in the grip of the terrors of performativity and are engaged in a struggle over the (mathematics) teacher's soul (Ball, 2003).

Faced with this struggle, Judyth Sachs calls for teachers to take on an 'activist identity' (2001), one which arises from democratic discourses and has social justice at its heart; and Ian Stronach and colleagues have called for teachers to 're-story' themselves (Stronach, Corbin, McNamara, Stark, & Warne, 2002: 130) in ways which challenge their positionings by neoliberalism. Many teachers are engaged in this re-storying in a variety of ways:

not all teachers are convinced by the rhetorics of performance, and many teachers are not convinced all of the time. (Ball, Maguire, Braun, Perryman & Hoskins, 2012: 588)

It is in support of this process that we are proposing a role for historical "companionship", overcoming the destruction of organisational memory (Goodson, 2014).

Here we will say a little about the mathematics education project the history of which we are exploring. *Smile Mathematics* was a secondary mathematics curriculum development project initiated by teachers and funded and supported by the Inner London Education Authority's (ILEA). It came into being in the 1970s, a time of reconstruction in the English school system characterised by a commitment to social justice (Goodson, 2014). It stood for all attainment teaching, teacher creativity and an investigative, problem-solving pedagogy. It saw itself as learner centred and gave considerable responsibility to students for organising and shaping their own learning and that of their learning community.

Teachers were released from school one day a week over many years to form a working collective to create, refine and publish materials for use in their own classrooms and beyond. The structure of the project instilled a deep democracy, with decision making resting with a consensus of those who participated. Against the advice of the ILEA Chief Inspector for Mathematics, who advocated a more traditional democratic structure, *Smile* adopted an open authority structure which placed the teacher at the heart of decision making - and was allowed to do so. *Smile* afforded opportunities for democratic professionalism, a concept which has collaboration at its core (Whitty, 2006).

In the current project, we are creating an archive using digital media which will include archive material and both accounts written contemporaneously with *Smile*

and recent accounts which have been generated as a result of the project. We intend to create a 'systematic narrative' based on historical documents (Goodson, 2014, p. 34-35), some already archived and some collected as part of the project. This will provide a framework within which to view the recently generated material.

In this paper, the focus of our attention is on the retrospective accounts. Our main source for this has been three extended conversations which we have conducted with groups of *Smile* teachers from an earlier era. We also participated - both of us were/are *Smile* teachers. The conversations involved between six and eight participants each including ourselves and each lasted around three hours. They were audio recorded and have been transcribed. We have also conducted an individual interview and participants have been encouraged to provide further personal commentaries and archive material. It is the vividness, the strong sense of lived experience, the humour and vitality of these texts, that will support the potentially transformative function we have in mind.

DISCUSSION

So, we have become interested in the idea that adopting an historical perspective can make more apparent the fact that different regimes of truth hold sway at different times and in different places (Hall & Noyes, 2009: 851). Once this is recognised, the current taken-for-granted can be more easily seen for what it is: a temporary set of hegemonic assumptions, historically contingent and fragile (Ball, Maguire, Braun, Perryman & Hoskins, 2012: 514); and a set assumptions that serve some people's interests more than others. However, reweaving the threads of significance between then and now is a delicate and difficult task (Anderson, 2000: 13-14).

We are not historians; but we do not think that this, in and of itself, should disqualify us. We have found helpful in trying to characterise our historical endeavour ideas which inform the Radical History Workshop movement, in particular, the thinking of Raphael Samuel and his seminal paper *On the methods of History Workshop: a reply* (1980). Like them, we want a space in our writing for political or moral commitment. The radical history movement grew out of a desire of a group of historians to challenge the conventional academic treatment of history: 'an academic mode in which the historical subject was subsumed in the methodological preoccupations of the historian' (164). Rather, the subject was herself / himself allowed a voice and encouraged to speak. We see ourselves as relatively untrained "barefoot" historians whose authority comes from knowing the terrain.

Thus, we are deeply invested in the subject of study. The radical history tradition does not describe itself as a value free social science nor claim historical neutrality; rather it asserts that truth is partisan and is a weapon in the battle of ideas (Samuel, 1980: 168) - 'so far from attempting to bury our beliefs, or to claim that they did not exist, we have preferred openly to proclaim them' (168). However, our involvement with our data does mean that we have to be constantly alert to the possibility of reading it in ways which just suit our own purposes and our sense of our own

personal and professional histories; or which sentimentalise; and we need to acknowledge discontinuities, ambiguities and contradictions in our data. The intention is not to valorise the past (although we do believe that the period under study was a time of more democratic mathematics education, sometimes informed by stirrings of socialism) but to use it to see the present more clearly.

Alongside other forms of representation (archive material, edited transcripts, aphoristic fragments), we intend to tell stories from the past. Doing so will inevitably implicate us in the conventions of this particular genre for representing reality (Stronach and Maclure, 1997: 49), leading us to 'resolve contradictions, smooth over inconsistencies and achieve a sense of closure' in our stories (53). We accept this limitation and hope to employ textual features so that visitors to the website are alerted to it. We intend our stories to be honest and to be faithful to our material and to our interlocutors; but we also want them to "perform" in the ways we have suggested above for those who visit the website.

Indeed, we claim that our use of stories helps make explicit the fact that 'the past is constituted in narrative' (Hodgkin & Radstone, 2003:2): it is always a representation, a construction, and can never be the "original" of the phenomena being studied (Passerini, 2000: 134). Any account privileges some things and ignores others:

As in a still life picture, some objects will have been blown up out of all proportion, others reduced in scale, while the great majority will have been crowded out of the frame. Historians thus do not reflect the past -they signify and construct it; meaning is in the eye of the beholder. (Samuel, 1980: 171)

It is this provisionality which is foregrounded in creating history as the remembered. Recounting memories gives a 'more cautious and qualified relation to the past than the absolute assertion that for some is associated with history' (Hodgkin & Radstone, 2003: 2). Much recent memory work has been concerned with traumatic experiences, ones which have been either previously hidden from historical accounts or recounted from perspectives other than those of the survivors. In these cases, the intention is to contest the accepted - or, at least, the previous - version of history. Our concerns are rather different. There is an occasional negative reference back to the period we are studying but in general it is the absence of any account at all that is so evident. The traces of the past are unseen, ignored and forgotten (Passerini, 2000: 135).

Central to our enterprise is the contention that 'history is about the present' (Hodgkin & Radstone, 2003: 1). We argue that to look backward is not backward-looking but, rather, forward-looking. Our use of history in this project is 'present-minded' (Samuel, 1980: 168). The accounts from *Smile*, both archived stories and stories created by shared memory, 'historicise understanding of the present' (169), shedding light on contemporary realities in mathematics education. We assert that 'our understanding of the past has strategic, political, and ethical consequences' (Hodgkin & Radstone, 2003: 1). The meaning with which we invest the past is also the

meaning with which we invest the present and shapes how we take the past and the present forward:

an understanding of subjective experience and everyday social relationships can be used to pose major questions in politics and theory, and to transform our understanding of some of the leading phenomena of our time. (Samuel, 1980: 173-174)

We note here the significance that is attached to the "everyday". Although we are committed to interrogating the "big story" of neoliberalism, our stories will do this through evoking a different way of being in the world from that offered by the current neo-liberal project, presenting as it does the individual before the community and reducing educational relationships to ones of exchange value. If our stories are to realise the power we invest in them, they will need to recover 'the texture of daily life in the past' (Samuel, 1980: 172). We note that such memories are a fragile possession that will vanish with the bearers unless set down and recorded; but that 'detached from the self who remembers, memory can become a property to be inherited and passed on' (Hodgkin & Radstone, 2003: 10).

CONCLUSION

We appreciate that there are real dangers in our project.

Memory, because of its powerful pull towards the present, and because of its affective investments, allows more readily for a certain evasion of critical distance. (Hodgkin & Radstone, 2003: 8)

We want our stories to summon up the sense of a life being lived, of the personal and of subjective experience. But it is essential for our project that it also enables critical distance and an acknowledgement of the political dimensions of the past, present and future. We want to find and walk along the fine line between affective, empathetic engagement and a robust commitment to acting for the future. We have written elsewhere about our 'enchantment' with our data because it 'allows recognition of the excessive, the ebullient, the vivid and the felt' (Burnett & Merchant, 2016: 30); but we do not want - and argue that the enchantment does not need to be - an empty nostalgia that entails no practice. Timothy Bewes (2002) describes nostalgia as being a one-way relationship to the world, its typical effect being to 'reify the past into a frieze of clichés, incapable of releasing inventive action in the present' (172). One of the striking things about the research conversations which generated the stories was a strong sense of a continuing engagement by the participants with the politics of the present. This came across in both positive and negative reflections on our shared past. These people looked back to what was in general conceived of as a better place but with a continuing commitment to a better future.

We acknowledge that our intentions are utopian. Luisa Passerini (2000) has written about the utopian use of history:

not in the sense of a ready-made scheme projected onto the real world, but rather as a criticism of existing conditions springing from an intuition of changes potentially immanent in the present. (138)

It is precisely this sense of using history to see the possible held within the present that has motivated us in our work. In the search for alternatives, both other places and other strands of thought lying outside the ones to which we have become habituated can work to challenge the discourses that dominate us and, despite our best endeavours, shape our thinking. We have argued here that *other times* can do this too. But the past alone, of course, is not itself agentic.

Only a genuine transformative passion can weave lost experience into the finding of a more liveable future. (Bewes, 2002: 172)

It is in the quest for a more liveable future that we find our purpose. On a personal level, we have found that our engagement with this history project has given us greater clarity about the English mathematics education present (and reinforced hope for and commitment to a better mathematics education future); for us, it has reduced our historical loneliness. At the time of writing, we are about to begin work on the website and to struggle to find ways to make our historical material "work" for those who were not there.

ACKNOWLEDGEMENT

We are grateful to the British Academy / Leverhulme for financial support for the project (Grant SG150824).

NOTE

¹ A more extended version of this section can be found in Povey, Hilary & Adams, Gill with Everley, Rosie (2016) "Its influence taints all": mathematics teachers resisting performativity through engagement with the past. Paper presented for 13th International Congress on Mathematical Education, Hamburg, 24-31 July 2016.

REFERENCES

- Anderson, P. (2000). Renewals. *New Left Review*, 1, 1-20.
- Ball, S. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, 18(2), 215-288.
- Ball, S., Maguire, M., Braun, A., Perryman, J., & Hoskins, K. (2012). Assessment technologies in schools: 'deliverology' and the 'play of dominations'. *Research Papers in Education*, 27(5), 513-533.
- Berger, J. (2016). History is a meeting place. *New Statesman*, 15-21, Jan., 2016. 17.
- Bewes, T. (2002). An anatomy of nostalgia. *New Left Review*, 14, 167-172.
- Burnett, C. & Merchant, G. (2016). Literacy and Ephemerality: methodological explorations. Paper presented in 'Literacy and Ephemerality: methodological

explorations' symposium at American Education Research Association conference, 8-12 April, 2016, Washington DC.

- Day, C., & Smethem, L. (2009). The effects of reform: Have teachers really lost their sense of professionalism? *Journal of Educational Change*, 10(2-3), 141-157.
- Goodson, I. (2014). *Curriculum, personal narrative and the social future*. Abingdon: Routledge.
- Gramsci, A., Nowell-Smith, G., & Hoare, Q. (1971). *Selections from the prison notebooks of Antonio Gramsci*. (Eds. and trans.) Q. Hoare & G. Nowell-Smith. New York: International Publishers.
- Groundwater-Smith, S., & Mockler, N. (2009). *Teacher professional learning in an age of compliance: Mind the gap*. Milton Keynes: Springer.
- Hall, C., & Noyes, A. (2009). New regimes of truth: The impact of performative school self evaluation systems on teachers' professional identities. *Teaching and Teacher Education*, 25(6), 850-856.
- Hodgkin, K., & Radstone, S. (2003). Introduction: Contested pasts. In K. Hodgkin & S. Radstone (Eds.) *Contested pasts: The politics of memory*. (pp. 1-22) London: Routledge.
- Macpherson, I., Robertson, S., & Walford, G. (2014). An introduction. In I. Macpherson, S. Robertson & G. Walford (Eds.) *Education, privatisation and social justice: Case studies from Africa, South Asia and South East Asia* (pp. 9-24). Oxford: Symposium Books.
- Nixon, J., Walker, M., & Clough, P. (2003). Research as thoughtful practice. In P. Sikes, J. Nixon & W. Carr (Eds.) *The moral foundations of educational research knowledge, inquiry and values* (pp. 86-104). Maidenhead: Open University Press.
- Passerini, L. (2000). Discontinuity of history and diaspora of languages. *New Left Review*, 1, 137-144.
- Sachs, J. (2001). Teacher professional identity: Competing discourses, competing outcomes. *Journal of Education Policy*, 16(2), 149-161.
- Samuel, R. (1980). On the methods of History Workshop: A reply. *History Workshop Journal*, 9(1), 162-176.
- Stronach, I., Corbin, B., McNamara, O. Stark, S., & Warne, T. (2002). Towards an uncertain politics of professionalism: Teacher and nurse identities. *Education Policy*, 17(1), 109-138.
- Stronach, I., & Maclure, M. (1997). *Educational research undone: The postmodern embrace*. Buckingham: Open University Press.
- Whitty, G. (2006). Teacher professionalism in a new era. *First General Teaching Council for Northern Ireland Annual Lecture, Belfast*, 3, 2006.